

**AMENDMENTS TO THE DRAWINGS**

The attached three sheets of drawing includes changes to Figs. 1A, 2A, and 3. These sheets, which include Figs. 1A, 1B, 2A, 2B and 3, replace the original sheets showing Figs. 1A, 1B, 2A, 2B and 3. In Figs. 1A, 2A and 3 a line showing the dimension "d" as discussed on page 15, line 20 et seq. is provided in response to the requirement to do so in paragraph 2 on page 2 of the Office Action.

**REMARKS**

Reconsideration and allowance of this application, as amended, is respectfully requested.

This Amendment is in response to the Office Action dated September 28, 2004.

By the present Amendment, independent claim 5 has been amended for clarification, and claims 21 and 45 have been amended to adopted the Examiner's suggestion in the Office Action. Appreciation is expressed to the Examiner for the suggestion regarding these claims. In addition, claims 29 and 30 have been canceled, without prejudice. Accordingly, in light of the amendments to claims 21 and 45, and the cancellation of claims 29 and 30, reconsideration and removal of the 35 U.S.C. § 112, second paragraph, rejection set forth in the Office Action is respectfully requested.

Also by the present Amendment, new claims 49-57, all of which are dependent , have been added to define further features of the present invention, as will be discussed below.

In addition, the present Amendment also shows the distance "d" in Figs. 1A, 2A and 3, corresponding to the discussion on page 15, line 20 et seq. of the specification, as required in the Office Action. Therefore, removal of the objection to the drawings is also respectfully requested.

Reconsideration and allowance of independent claims 4 and 27 over the cited reference to Taniguchi (USP 4954746) and Yamazaki (USPN 20010024083) is respectfully requested. Each of these independent claims 4 and 27 defines an

arrangement of a light extraction layer provided between an electroluminescent substrate and a counter substrate. In claim 4, an auxiliary electrode is also located, together with the light extraction layer, between the two substrates. In claim 27, a means for lowering resistance of a second transparent electrode is located, together with the light extraction layer, between the two substrates. As such, in both cases, a combination of a light extraction layer and another element is set forth as being located between the organic electroluminescent substrate and the counter substrate.

In the Office Action, the claimed light extraction layer is read as the space between the elements 16 and 6 of the Taniguchi reference. Referring to Fig. 6, column 4, line 61 et seq. of Taniguchi discusses this space as a closed space 27. Taniguchi then goes on to state that this space can either be evacuated or filled with a hydroscopic agent "such as silica gel or an insulating oil." As such, it is respectfully submitted that there is no teaching or suggestion in Taniguchi that the closed space between the elements 6 and 16 functions as a light extraction layer. Therefore, the claimed combination of a light extraction layer with an auxiliary electrode for means for reducing the resistance of a second transparent electrode is neither taught nor suggested by Taniguchi. Accordingly, reconsideration and allowance of the independent claims 4 and 27 is respectfully requested.

With regard to the matter of the light extraction layer, consideration and allowance of the newly presented dependent claims 49-51 is also respectfully requested. Each of these dependent claims, respectively dependent on the independent claims 4, 5 and 27, specifically defines that the light extraction layer has

a refractive index close to 1. This is supported, for example, by page 6, lines 5-7 which state:

"The light extraction layer is characterized in that it is formed from a material with a refractive index close to 1."

It is respectfully submitted that Taniguchi completely fails to suggest that the material within the closed space 27 between the elements 16 and 6 would have such a refractive index. Therefore, consideration and allowance of these dependent claims 49-51 is also respectfully requested.

Reconsideration and allowance of the further dependent claims 52-57 is also respectfully requested. These claims further define the arrangement of the light extraction layer in terms of being filled with an inert gas or, even more specifically, the inert gas being selected from a group consisting of N<sub>2</sub>, He, Ne, and Ar. These features are also discussed on page 6, lines 7-10 of the specification. These specific features for the light extraction layer are completely unsuggested by Taniguchi. Therefore, reconsideration and allowance of these newly submitted claims is also respectfully requested.

Regarding the above comments, it is noted that nothing in the secondary reference of Yamazaki suggests anything to make up for the shortcomings of the primary reference to Taniguchi with regard to the claimed light extraction layer and its combination with either an auxiliary electrode (claim 4) or means for reducing the resistance of a second transparent electrode (claim 27). Therefore, reconsideration and allowance of all of the claims 4, 27 and 49-57 over the combination of Taniguchi and Yamazaki is respectfully requested.

Reconsideration and allowance of independent claim 5 over the combination of Taniguchi, Yamazaki and Fukuda (USP 6505901) is also respectfully requested. In addition to the features of a light extraction layer and an auxiliary electrode (or means for reducing resistance of a second transparent electrode) between the organic electroluminescent substrate and a counter substrate, claim 5 has been amended to define that the total thickness "d" of a layer ranging from the light emitting area of the organic layer to the second transparent electrode satisfies an equation  $d < \lambda/4$  ( $\lambda$ : center wavelength of emitted light). In the Office Action, it is recognized that both Taniguchi and Yamazaki are "silent to a total thickness d of a layer ranging from a light emitting area in the organic layer to the second transparent electrode." However, Fukuda is cited to meet the limitation in the claimed equation (referring to claim 3, lines 31-34 of Fukuda). Regarding this, Fukuda teaches a material in which an optical distance from a light emitting interface to an interface with the largest difference in refractive index equals even multiples of one quarter of a wavelength. As such, by the present amendment, emphasizing that the total distance is less than a quarter of a wavelength, it is respectfully submitted that claim 5 now defines a structure neither taught nor suggested by Fukuda, wither considered alone or in combination with Taniguchi and Yamazaki. Therefore, reconsideration and allowance of independent claim 5 is also respectfully requested.

Reconsideration and allowance of the other dependent claims 6-26 and 28-48 over the cited references, including the further reference to Ishihara (USP 5864206) and Inohara (USP 3357557) is also respectfully requested. These dependent claims define further overall combinations which serve to further define over the various


cited references, whether considered alone or in combination with one another. Therefore, reconsideration and allowance of these dependent claims is also respectfully requested.

If the Examiner believes that there are any other points which may be clarified or otherwise disposed of either by telephone discussion or by personal interview, the Examiner is invited to contact Applicants' undersigned attorney at the number indicated below.

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to the Antonelli, Terry, Stout & Kraus, LLP Deposit Account No. 01-2135 (Docket No. 500.41280X00), and please credit any excess fees to such Deposit Account.

Respectfully submitted,

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## **APPENDIX**



FIG.1A

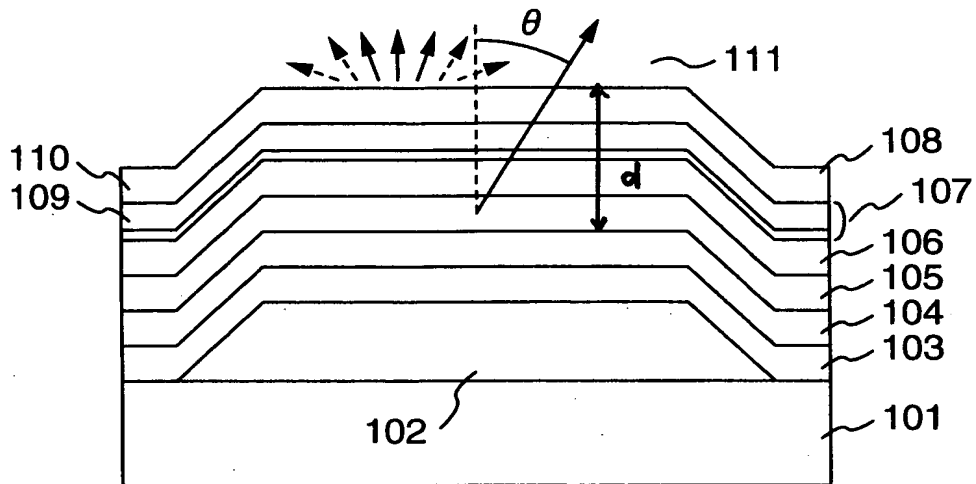


FIG.1B

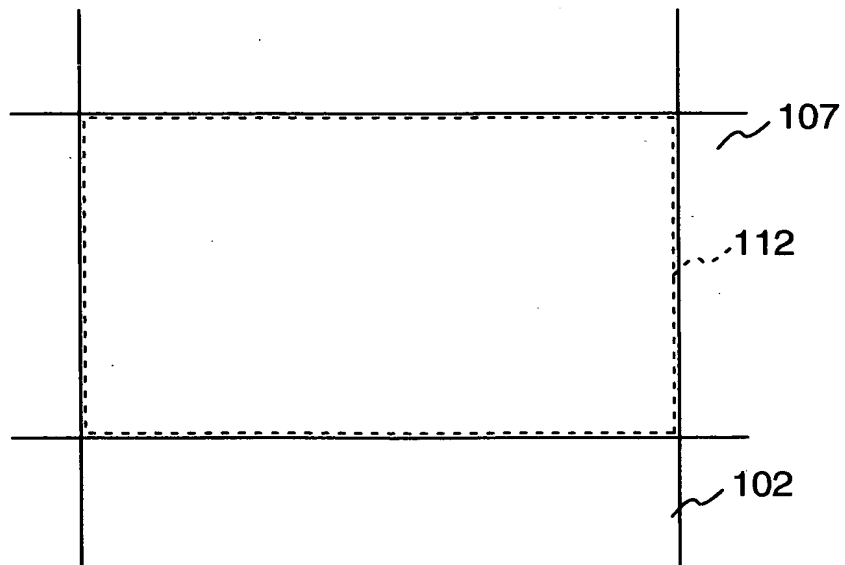




FIG.2A

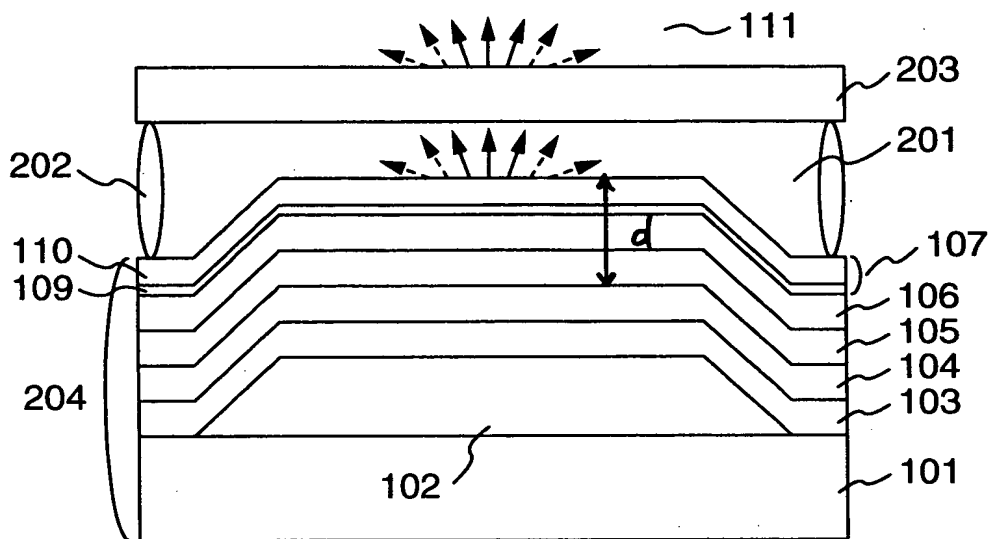
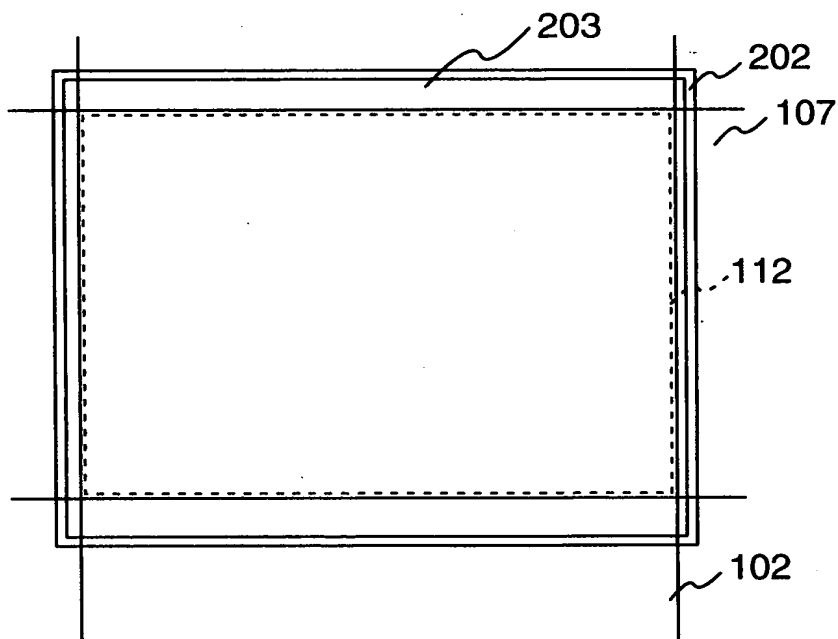


FIG.2B



This diagram shows a cross-sectional view of a multi-layered optical device. A central core region, labeled 301, is composed of multiple layers (303, 304, 305, 306, 307, 308, 309) and is flanked by cladding layers 302 and 302'. The core is surrounded by a protective layer 310. The device is supported by a substrate 311. A central channel 312 is formed by a series of layers (313, 314, 315, 316, 317, 318, 319) and is flanked by cladding layers 320 and 322'. The channel is surrounded by a protective layer 320'. The device is shown in a cross-sectional view, with the central channel 312 and the central core 301 being the primary features.